~~Abstract~~

## ABSTRACT OF THE DISCLOSURE

~~Method, base station and subscriber station for channel coding in a GSM mobile radio system~~

A method, base station and subscriber station which ~~According to the invention, it is proposed to~~ use recursive systematic codes (RSC codes) for channel coding in GSM mobile radio systems. In contrast to previous conceptions, these RSC codes ~~can~~ also can be used on the basis of the hardware installed in existing GSM mobile radio systems. The RSC codes can be introduced during the introduction of an adaptive multirate coder ~~(AMR)~~.

~~Figure 5~~

~~Key to figures~~

~~Figure 1:~~

~~Stand der Technik = Prior art~~

~~Figure 2:~~

~~Nonsystematic nonrecursive code with memory 4 and rate 1/2 analogously to GSM/TCHFS~~

~~Figure 3:~~

~~Identical recursive systematic convolutional code with memory 4 and rate 1/2~~

~~Figure 4:~~

~~1 In band data~~

~~2 Voice frames~~

~~3 Sorting~~

~~4 Class 2~~

~~5 Block code~~

~~6 Convolutional code~~

~~7 or~~

~~8 Reordering and distribution~~

~~9 Diagonal interleaving~~

~~in: 4 blocks~~

~~out: block pairs~~

~~10 Encryption~~

~~Figure 5:~~

~~Polynomials used in different channels in the GSM mobile radio system~~

~~1 User data channel, adaptive multirate coding, full rate~~

~~2 User data channel, adaptive multirate coding, half rate~~

~~Figure 6:~~

~~1 Receiver~~

~~2 Channel decoder~~

~~3 Post processing~~